COUNCIL AGENDA: 5-18-04
ITEM: 6.2

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Nadine N. Nader

SUBJECT: **SEE BELOW**

DATE: M

Approved David Borgsdorf Date 05

SUBJECT: BART ALIGNMENT AND STATION CONFIGURATIONS [BUILDING BETTER TRANSPORTATION]

On May 3, 2004 staff made a presentation to the Committee on the final alignment and station configurations for the San Jose portion of the BART project, and requested that the item be forwarded to Council for approval of the alignment and configurations of the BART project as noted in the staff report.

Upon motion by Councilmember Chavez, and seconded by Councilmember Williams, the Committee accepted the staff report.

A copy of the staff memo is attached for your review.

Nadine Nader
NADINE N. NADER
Senior Executive Analyst
City Manager's Office

Attachment

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

BBT AGENDA: 05-03-04
ITEM: A. 2

Memorandum

TO: BUILDING BETTER TRANSPORTATION COMMITTEE

FROM: James R. Helmer

SUBJECT: **BART ALIGNMENT AND STATION CONFIGURATIONS**

DATE: 04-22-04

Approved _____

Date 4/23/04

RECOMMENDATION

Approve final alignment and station configurations for the San José portion of the BART project, and forward a recommended City position for City Council action on May 18, 2004.

BACKGROUND

The Santa Clara Valley Transportation Authority (VTA) is developing the Silicon Valley Rapid Transit Corridor/BART to San José project. The scope of the project includes the extension of the Bay Area Rapid Transit (BART) system into Santa Clara County with stations in the cities of Milpitas, San José and Santa Clara. The total length of the project is 16.3 miles, and it includes a 4.5-mile subway tunnel through the Downtown San José area. Attachment A includes a map of the project alignment and station locations.

The basic configuration of the BART project was adopted in November 2001, following completion of a Major Investment Study (MIS). In May and June of 2002, the City Council and the BART project Policy Advisory Board (PAB) selected a preferred design direction for many alignment and station configuration issues. Several items were deferred for further analysis as part of the environmental review process. This assessment is now complete and six design issues have been identified requiring policy recommendations from the City of San José to the BART PAB. The City's members on the BART PAB are Mayor Gonzales and Councilmember Chavez. The BART PAB is scheduled to take action on outstanding project design issues at their meeting on May 26, 2004.

The VTA has initiated preliminary design work for the BART project and design direction is needed to facilitate this effort. The estimated project cost is $4.1 billion. The 2000 Measure A program will provide 60% of the funding, and the balance of funding is being pursued from State and Federal sources. Completion of preliminary engineering is intended to elevate the "readiness" of the BART project and improve opportunities to secure State and Federal funding. The goal is to begin construction in 2008 and to achieve completion by 2014.

ANALYSIS

The following six design issues have been identified for the San José segment of the project:

1. Berryessa Station Parking Structure Location
2. Alum Rock Alignment and Station Location
3. Downtown San José Crossover Track Location
4. Diridon/Arena Alignment and Station Location
5. Downtown Station Entrances
6. Airport Connection

A City staff team comprised of representatives from the Department of Transportation (DOT), the Department of Planning Building and Code Enforcement (PBCE) and the San José Redevelopment Agency (SJRA), has held regular monthly meetings with VTA, BART and project consultants to facilitate development of the project and to advocate for the City's interests. The following summary analysis and recommendations relating to the BART project design issues have been jointly prepared by the City/Agency staff team. A summary list of the staff recommendations is provided in Attachment B.

Issue 1 - Berryessa Station Parking Structure Location

Two options have been studied for the location of the Berryessa BART station parking structure. See Attachment C for a location map of the parking options.

- **Option 1: Parking Structure Southwest - *Recommended***
- Option 2: Parking Structure Northeast

Option 1 is recommended since it has a significantly lower cost and lower impact to existing businesses. This option provides a multi-level parking structure for up to 2500 spaces on the southwest quadrant of the station site and is located on the current site of the San Jose Flea Market overflow parking lot. This option also allows for the best access to the station parking from the planned Route 101 interchange at Mabury Road. It is noted that the owners of the Flea Market have expressed concerns that Option 1 affects their future development potential. Option 2 would place the parking structure at the northeast quadrant of the station, and require the acquisition of existing industrial/office buildings having an increased cost of $49.7 million.

Issue 2 - Alum Rock Alignment and Station Location

Two options have been studied for the Alum Rock station location and the BART alignment in the vicinity of the station. See Attachment D for an illustration of the alignment options.

- Option 1: Railroad/28th Street
- **Option 2: US 101/Diagonal - *Recommended***

While Option 2 is more expensive as a result of a longer and lower tunnel necessary to pass under Route 101, it is recommended due to its significantly lower environmental and community impacts. Importantly, Option 2 avoids tunneling beneath residences in the Naglee Park neighborhood, and reduces the need for property acquisitions and easements. This option also provides a better track alignment resulting in lower costs for operations and maintenance. Option 1 has a lower construction cost in the amount of $24 million.

Issue 3 – Downtown San José Crossover Track Location

Two Downtown crossover track locations have been studied:

- **Option 1: West of Civic Plaza/SJSU Station - *Recommended***
- Option 2: West of Market Street Station

Crossovers provide operational flexibility within the BART system allowing for track switching to bypass a stalled train. Instances that cause a stoppage of trains include blockage of trackway, medical emergency with a passenger, public safety and enforcement issues, and mechanical failures. Operational flexibility is considered essential by BART staff in order to provide a reliable transit service.

For the 4.5-mile Downtown tunnel section, crossovers are needed at each end of the tunnel and near the mid-point. The key design objective is to have the crossover located so that BART trains can switch to the opposite track and bypass a stalled vehicle without delaying an opposing train. The mid-point of the Downtown tunnel is in the vicinity of the Market Street station. Two crossover location options have been studied for east and west of the Market Street station.

The construction of a crossover needs to be done using the "cut and cover" method, thereby resulting in surface impacts similar to the construction of a station. The length of a crossover track section is approximately 700 feet and it must be located along a tangent (straight) segment of track.

Option 1 is recommended as it provides the optimal operational flexibility. The location is both at the mid-point of the tunnel and the mid-point of the four Downtown subway stations. Option 2 does not meet the operational requirements needed to achieve reliable service. Also, Option 2 is not compatible with the preferred location of the Diridon/Arena station (see Issue 4), since this requires a curved track alignment west of the Market Street Station.

Issue 4 - Diridon/Arena Alignment and Station Location

Two options have been studied for the Diridon/Arena station location and the BART alignment in the vicinity of the station. See Attachment E for an illustration of the alignment options.

Option 1 - North Alignment (just South of East Santa Clara Street)
Option 2 - South Alignment (beneath the former Crandall Street right-of-way) - *Recommended*

The key issues associated with locating the Diridon/Arena station relate to providing good connectivity with other transit services at the Diridon Station (bus, light rail, Caltrain, Altamont Commuter Express (ACE), Amtrak, and future High Speed Rail) and to support existing and future development in the vicinity. Option 2 offers superior connectivity to the Diridon Station, which will facilitate convenient multi-modal transfers and the Crandall Street alignment offers opportunities for future development consistent with the findings of the strategic development plan for the Diridon/Arena area. It is noted that the owners of the San José Water Company have expressed concerns with Option 2 relative to the increased tunneling under their property and the potential impact to their future development plans. Staff believes that economical building foundation options are available that are compatible with the BART tunnel. Option 1 reduces costs by $22 million due to a shorter tunnel length. However, it is not recommended primarily due to the added distance away from the Diridon station.

Issue 5 – Downtown Station Entrances

The conceptual design for the BART stations in the Downtown area include multiple station entrance options: 7 at Civic Plaza; 11 at Market Street; and 5 at Diridon/Arena. It is recommended that most of the options be carried forward to preliminary engineering to allow for further evaluation of cost issues and joint development opportunities. Only one proposed station entrance is recommended to be dropped, due to significant impacts to a historic building. This location is one of the eleven Market Street Station entrance options and it is located on the south side of East Santa Clara Street between First and Second Streets.

Issue 6 - Airport Connection

Option 1 – At-Grade Alignment for a Future APM Connection - *Recommended*
Option 2 – Lowered Alignment for a potential future direct BART/Airport Connection

The initial design concepts for connection of BART service to the Mineta San José International Airport have consisted of using an Automated People Mover (APM) system that integrates all rail transit connections (light rail, Caltrain, ACE, and BART) and multiple airport facilities (the new Central Terminal, Terminal A, rental car facilities and public parking). Continuation of the APM connection concept (Option 1) is recommended because it has the advantages of 1) better

overall transit system ridership and connectivity, 2) better access to multiple Airport destinations, 3) better ability to manage Airport security, and 4) substantially lower cost. In addition, the 2000 Measure A has identified $200 million for development of the APM connection to the airport. Option 2 would provide for a BART project design that accommodates future potential for direct BART access to the Airport at an added cost of $7 million. The estimated cost of the actual extension would be in excess of $700 million. This is not recommended since the APM connection provides a better service at a substantially lower cost.

PUBLIC OUTREACH

VTA has conducted community meetings on the BART project at key study milestones during the project development process. The most recent public meetings were held April 7th through April 19th in Santa Clara, San José and Milpitas. A Public Hearing is scheduled in San José on May 10, 2004. Community Working Groups in San José include the Berryessa/Hostetter, and Alum Rock/Downtown neighborhoods.

COORDINATION

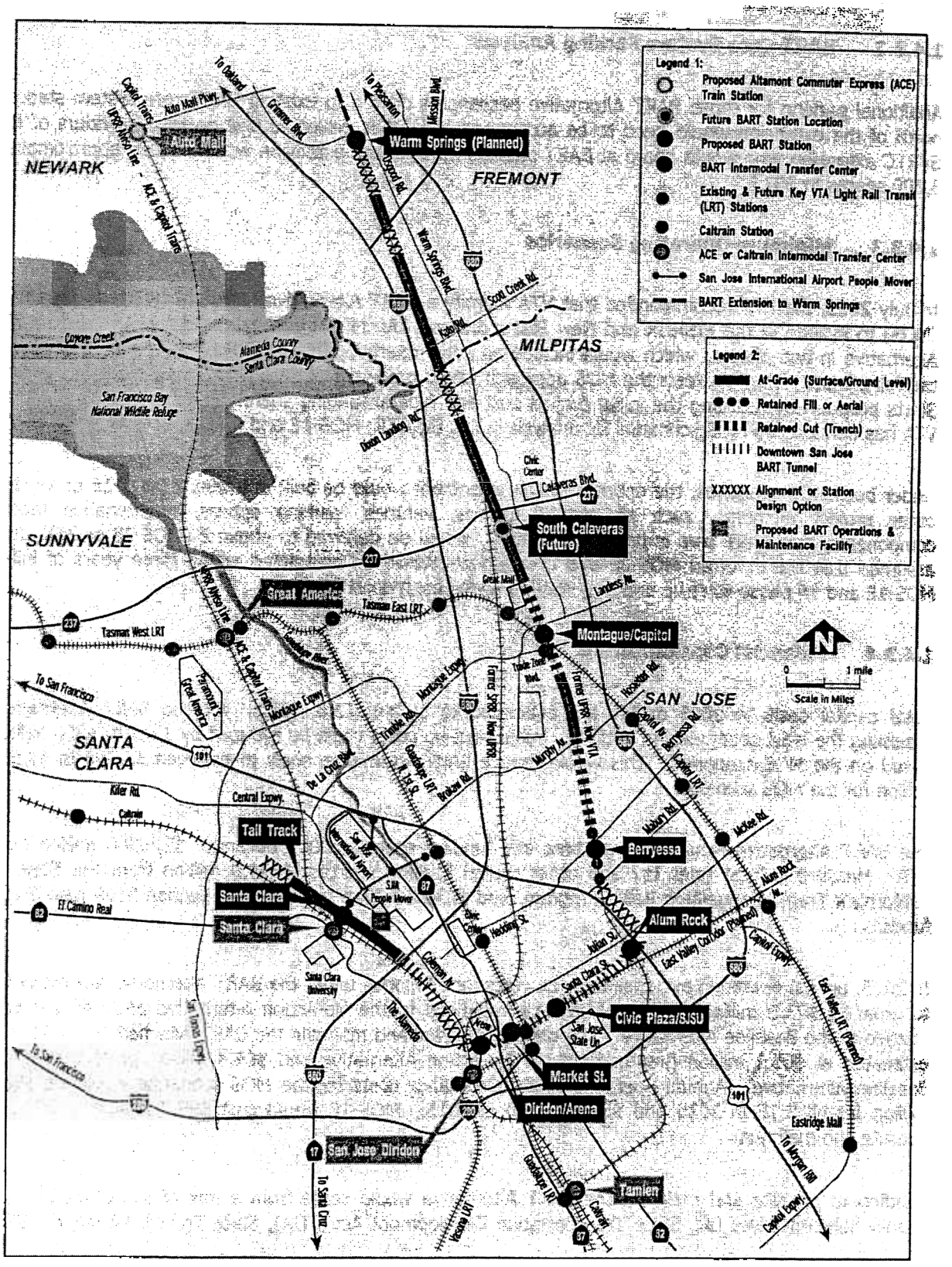
This item has been coordinated with staff from the Santa Clara Valley Transportation Authority (VTA), the Bay Area Rapid Transit District (BART), the Department of Public Works (DPW), the Department of Planning, Building and Code Enforcement (PBCE), the Airport Department, and the San Jose Redevelopment Agency (SJRA).

Director of Transportation

Attachments

Attachment A

BART Project Location and Alignment



BART ALIGNMENT AND STATION CONFIGURATIONS
Summary of Issues and Staff Recommendations

Issue 1 - Berryessa Station Parking Structure Location

Option 1: Parking Structure Southwest – *Recommended*
Option 2: Parking Structure Northeast

Issue 2 - Alum Rock Alignment and Station Location

Option 1: Railroad/28th Street
- **Option 2: US 101/Diagonal - *Recommended***

Issue 3 – Downtown San José Crossover Track Location

- **Option 1: West of Civic Plaza/SJSU Station - *Recommended***
- Option 2: West of Market Street Station

Issue 4 - Diridon/Arena Alignment and Station Location

Option 1 - North Alignment (just South of East Santa Clara Street)
Option 2 - South Alignment (beneath the former Crandall Street right-of-way) - *Recommended*

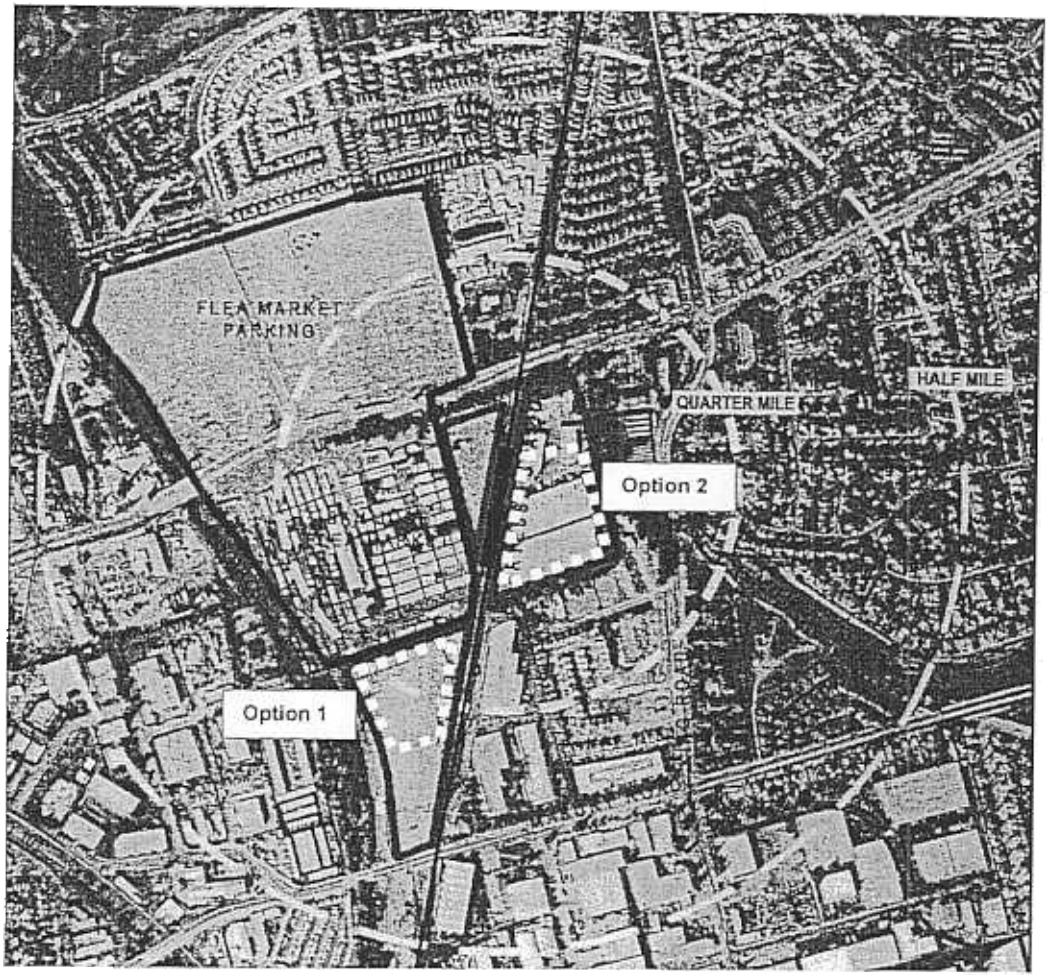
Issue 5 – Downtown Station Entrances

It is recommended to carry forward all Downtown station entrance options for preliminary engineering evaluation except for the Market Street Station entrance located on the south side of East Santa Clara Street between First and Second Streets.

Issue 6 - Airport Connection

Option 1 – At-Grade Alignment for a Future APM Connection – *Recommended*
Option 2 – Lowered Alignment for a Potential Future Direct BART/Airport Connection

Berryessa Station Parking Structure Location



Option 1 - *Recommended*

Multi-level parking structure on southwest quadrant of station site on current site of San Jose Flea Market overflow parking lot.

Option 2

Multi-level parking structure east of the station site on current site of office/research and development park.

Attachment D
AMENDED

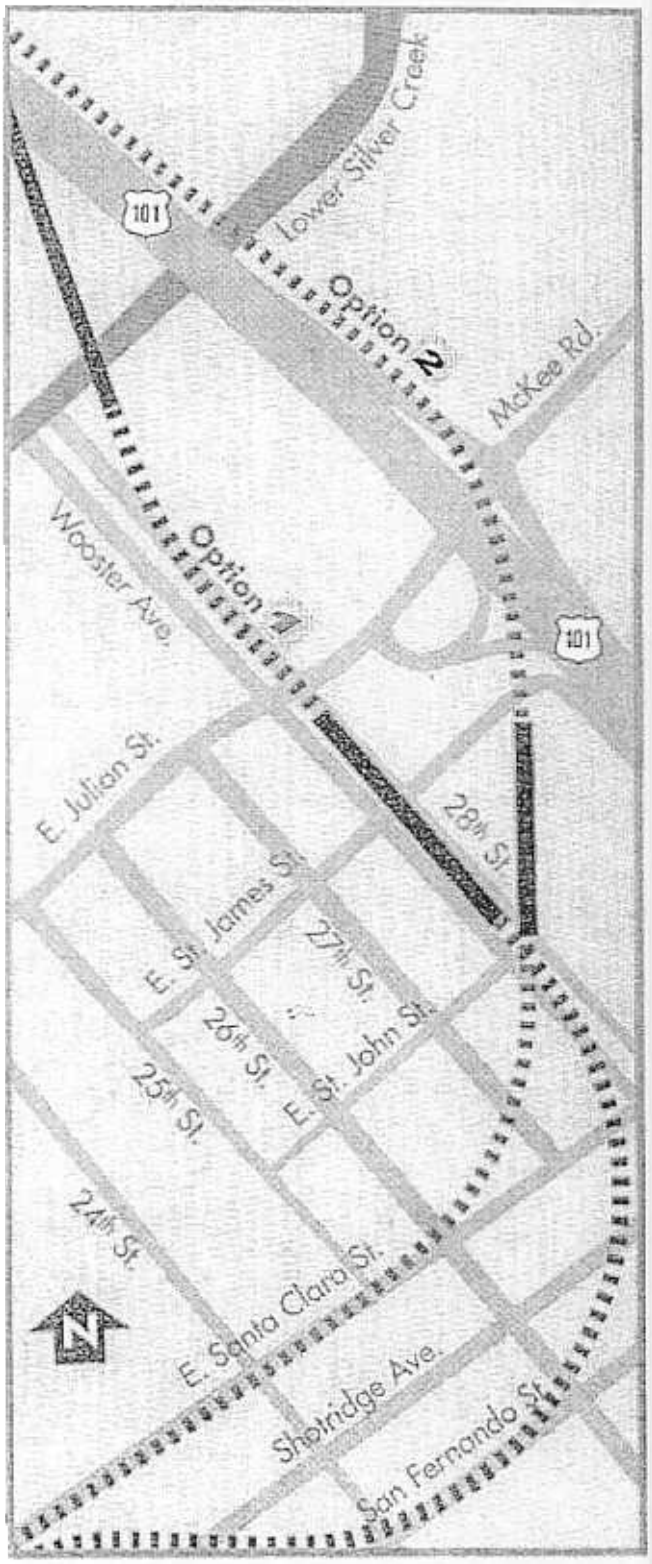
Alum Rock Station Location and Alignment

Option 1

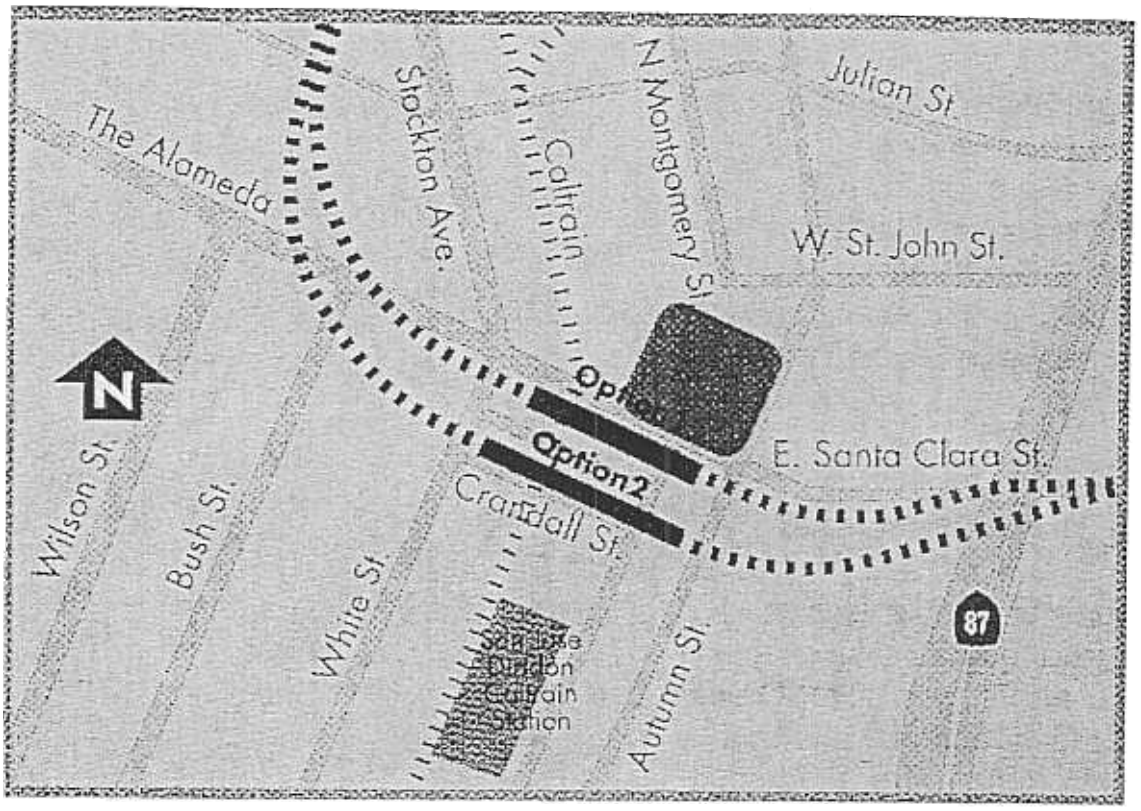
The alignment would remain above ground and cross over U.S. 101 and Lower Silver Creek and then descend into a tunnel north of E. Julian Street. The subway would curve under E. San Fernando Street and then loop back to reach E. Santa Clara Street. The Alum Rock Station would be located between E. Julian and E. St. John Streets.

Option 2 - *Recommended*

The alignment would curve under U.S. 101 near McKee Road/ E. Julian Street and would continue underground below E. Santa Clara Street. Alum Rock Station would be located between U.S. 101 and 28th Street.



Diridon/Arena Station Location and Alignment



Option 1

The alignment and station would be located immediately south of E. Santa Clara Street.

Option 2 - *Recommended*

The alignment would divert from E. Santa Clara Street east of Route 87 passing under Crandall Street. The station would be located under Crandall Street.